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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,585	12/05/2001	Timothy R. Spooner	Analog 5721-5	3538
7590	11/19/2003		EXAMINER	
Samuels, Gauthier & Stevens LLP Suite 3300 225 Franklin Street Boston, MA 02110			HOGANS, DAVID L	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/007,585	SPOONER ET AL.
	Examiner	Art Unit
	David L. Hogans	2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 September 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11,24-29 and 32-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-11,24,25 and 32-45 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 26-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 December 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5,9.
- 4) Interview Summary (PTO-413) Paper No(s). _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Claims 26-29 in Paper No. 10 is acknowledged. The traversal is on the ground(s) that "[T]he Examiner has failed to provide a prima facie case that the alleged grouping of claims set forth patentably distinct species." This is not found persuasive because page 3, of Paper No. 8, provided page and line number specification references, to Applicant's admitted different aspects of the invention.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-11, 24-25 and 32-45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 10.

Status of Claims

Claims 26-29 are pending. Claims 1-25 and 30-60 are withdrawn.

Priority

Acknowledgment is made of a claim for domestic priority under 35 U.S.C. 119(e) to provisional applications 60/251,287 filed December 5, 2000, and 60/251,288 filed on December 5, 2000.

Information Disclosure Statement

The Information Disclosure Statements filed on February 20, 2002, November 4, 2002, and July 28, 2003, entered as Paper Nos. 4, 5 and 9, respectively, have been considered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 26-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In Claim 26, line 3, the Applicant refers to "etched ports". The Examiner is uncertain as to if "etched ports" are merely openings provided in the backside of the wafer surface or are they access points wherein signals can be input/output to the electronic circuit. Further, the Examiner is uncertain as to if the "possible leak path" (Claim 26 lines 3-4) is referring to a leak path for liquid media or to electrical current. Finally, the Examiner notes that the language "possible" is defined by Merriam-Webster's Collegiate Dictionary (2001), Tenth Edition, as "something that may or may not occur". Therefore, the "possible leak path" need not occur. Clarification of these claimed elements is deemed necessary to understand the scope of the claim. Until such matter is deemed clarified, the Examiner will give the claims their broadest reasonable interpretation pursuant to MPEP § 2111.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 26 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by 6,215,194 to Nakabayashi.

In reference to Claim 26, Nakabayashi teaches:

- mounting, upon a backside of a wafer (1), a layer of dicing tape (2 and 43 – the side directly attached to layer 1), the wafer having a front patterned side and a plurality of etched ports (41 or 42) on a backside, the etched ports providing a possible leak path from a backside of the wafer to the front patterned side of the wafer; (See Figures 1A-1F and columns 5-6 lines 35-50)
- dicing the wafer into a plurality of dies; (See Figures 1A-1F and columns 5-6 lines 35-50) and
- mounting, upon the diced layer of dicing tape, a layer of transfer tape (43 - the side opposite the one directly attached to layer 1) (See Figures 1A-1F and columns 5-6 lines 35-50)

The Examiner further notes that the language "possible" is defined by Merriam-Webster's Collegiate Dictionary (2001), Tenth Edition, as "something that may or may not occur". Therefore, the "possible leak path" need not occur.

In reference to Claim 28, Nakabayashi teaches:

- removing the individual diced dies from the wafer (See Figures 1A-1F and columns 5-6 lines 35-50)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP55-102254 to Yonezawa in view of 5,622,900 to Smith.

Claim 26

Yonezawa teaches mounting, upon a backside of a wafer (11), a layer of dicing tape (22), the wafer having a front patterned side and a plurality of etched ports (20 and 23) on a backside, the etched ports providing a possible leak path from a backside of the wafer to the front patterned side of the wafer, and dicing the wafer into a plurality of dies. (See Figures 7-9 and Abstract translation) The Examiner further notes that the

language "possible" is defined by Merriam-Webster's Collegiate Dictionary (2001), Tenth Edition, as "something that may or may not occur". Therefore, the "possible leak path" need not occur.

Yonezawa fails to explicitly teach mounting a layer of transfer tape upon the dicing tape.

However, Smith, in Figure 2 and column 2 lines 25-35, teaches mounting a layer of transfer tape/releasable tape (38) upon the dicing tape.

It would have been obvious to one of ordinary skill in the art to modify Yonezawa by incorporating a layer of transfer tape upon the dicing tape, as taught by Smith, to adhere the individual die to a substrate wafer for additional fabrication steps.

Claim 27

Incorporating all arguments of Claim 26 and noting that Smith, in columns 2-3 lines 60-02, teaches wherein the layer of dicing tape has a UV releasable adhesive.

Claim 28

Incorporating all arguments of Claim 26 and noting that Smith, in column 2 lines 55-60, teaches removing the individual diced die from the wafer.

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP55-102254 to Yonezawa in view of 5,622,900 to Smith in view of 5,360,873 to Ohkawa et al.

Incorporating all arguments of Claims 26 and 28 and noting that Yonezawa and Smith fail to explicitly teach wherein individual dies are removed by initially exposing the dicing tape to UV radiation and disengaging the dies from the dicing tape with a die ejection needle.

However, Ohkawa et al., in column 23 lines 40-52, teaches wherein individual dies are removed by initially exposing the dicing tape to UV radiation and disengaging the dies from the dicing tape with a die ejection needle.

It would have been obvious to one of ordinary skill in the art to modify Yonezawa and Smith by incorporating individual dies removed by initially exposing the dicing tape to UV radiation and disengaging the dies from the dicing tape with a die ejection needle, as taught by Ohkawa et al., to remove the die for further processing.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 26-29 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 115 and 117 of copending Application No. 10/006,966 in view of 5,622,900 to Smith.

For Claim 26 of the instant application, Claim 115 of 10/006,966 recites all the limitations except for mounting a layer of transfer tape upon the dicing tape. However, Smith, in Figure 2 and column 2 lines 25-35, teaches mounting a layer of transfer tape/releasable tape (38) upon the dicing tape. It would have been obvious to one of ordinary skill in the art to modify 10/006,966 by incorporating a layer of transfer tape upon the dicing tape, as taught by Smith, to adhere the individual die to a substrate wafer for additional fabrication steps.

This is a provisional obviousness-type double patenting rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Hogans whose telephone number is (703) 305-3361. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (703) 308-4940. The fax phone

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number for the organization where this application or proceeding is assigned is (703)
308-7722.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is (703) 308-
1782.

dh

Carl Whitehead Jr.
CARL WHITEHEAD, JR.
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